

**Notice of Allowability**

Application No.

09/583,372

Examiner

Dwayne C Jones

Applicant(s)

CHEN, YUHPYNG L.

Art Unit

1614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Interview Summary of 22SEP2004 and the amendment of 21JUL2004.
2. ☒ The allowed claim(s) is/are 1-4 and 9-17.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                 |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>9/22/04</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>3/5/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                             | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance                                   |
|  | 9. <input type="checkbox"/> Other _____.  |

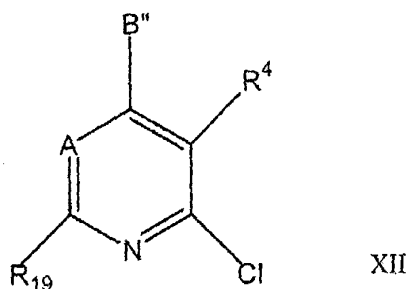
### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Clifford Mass on September 22, 2004.

The application has been amended as follows:

Claim 3 (currently amended) A compound of the formula



wherein  $R_{19}$  is methyl or ethyl;

$R_4$  is hydrogen,  $C_1$ - $C_4$  hydrocarbyl, fluoro, chloro, bromo, iodo,  $C_1$ - $C_4$  alkoxy, trifluoromethoxy,  $-CH_2OCH_3$ ,  $-CH_2OCH_2CH_3$ ,  $-CH_2CH_2OCH_3$ ,  $-CH_2OCF_3$ ,  $CF_3$ , amino, nitro,  $-NH(C_1$ - $C_4$  alkyl),  $-N(CH_3)_2$ ,  $-NHCOCH_3$ ,  $-NHCONHCH_3$ ,  $-SO_n(C_1$ - $C_4$  alkyl) where  $n$  is 0, 1 or 2, cyano, hydroxy,  $-CO(C_1$ - $C_4$  alkyl),  $-CHO$ ,  $-COOH$  or  $-COO(C_1$ - $C_4$  alkyl) wherein said  $C_1$ - $C_4$  hydrocarbyl may optionally contain one double or triple bond and may optionally be substituted with one substituent selected from hydroxy, amino,  $-NHCOCH_3$ ,  $-NH(C_1$ - $C_2$  alkyl),  $-N(C_1$ - $C_2$  alkyl) $_2$ ,  $-COO(C_1$ - $C_4$  alkyl),  $-CO(C_1$ - $C_4$  alkyl),  $C_1$ - $C_3$  alkoxy,  $C_1$ - $C_3$  thioalkyl, fluoro, chloro, cyano and nitro;

$A$  is N, CH or  $CCH_3$

$B''$  is  $-NR_1R_2$ ,  $-CR_1R_2R_{11}$ ,  $-C(=CR_2R_{12})R_1$ ,  $-NHCHR_1R_2$ ,  $-OCHR_1R_2$ ,  $-SCHR_1R_2$ ,  $-CHR_2OR_{12}$ ,  $-CHR_2SR_{12}$ ,  $-C(S)R_2$  or  $-C(O)R_2$  or cyano;

wherein  $R_1$  is  $C(O)H$ ,  $C(O)(C_1$ - $C_6$  hydrocarbyl),  $C(O)(C_1$ - $C_6$  alkylene) ( $C_3$ - $C_8$  cyclohydrocarbyl),  $C(O)(C_3$ - $C_8$  cycloalkylene) ( $C_3$ - $C_8$  cyclohydrocarbyl),  $C(O)(C_1$ - $C_6$

alkylene) (C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl), -C(O)(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl), C<sub>1</sub>-C<sub>6</sub> hydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cyclohydrocarbyl, C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl, -(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>3</sub>-C<sub>8</sub> cyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>3</sub>-C<sub>8</sub> cyclohydrocarbyl), -(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl), or -O-aryl, or -O-(C<sub>1</sub>-C<sub>6</sub> alkylene)-aryl; wherein said aryl, C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl, C<sub>1</sub>-C<sub>6</sub> hydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cyclohydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cycloalkylene, and C<sub>1</sub>-C<sub>6</sub> alkylene groups may each independently be optionally substituted with from one to six fluoro and may each independently be optionally substituted with one or two substituents R<sub>8</sub> independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> hydrocarbyl, -C<sub>3</sub>-C<sub>8</sub> cycloalkyl, hydroxy, fluoro, chloro, bromo, iodo, CF<sub>3</sub>, -O-(C<sub>1</sub>-C<sub>6</sub> hydrocarbyl), -O-(C<sub>3</sub>-C<sub>5</sub> cycloalkyl), -O-CO-(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -O-CO-NH(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -O-CO-N(R<sub>24</sub>)(R<sub>25</sub>), -N(R<sub>24</sub>)(R<sub>25</sub>), -S(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -S(C<sub>3</sub>-C<sub>5</sub> cycloalkyl), -N(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl)CO(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -NHCO(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -COO(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -CONH(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), -CON(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl) (C<sub>1</sub>-C<sub>2</sub> hydrocarbyl), CN, NO<sub>2</sub>, -OSO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl), S<sup>+</sup>(C<sub>1</sub>-C<sub>6</sub> hydrocarbyl) (C<sub>1</sub>-C<sub>2</sub> alkyl) I<sup>-</sup>, -SO(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl) and -SO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> hydrocarbyl); and wherein the C<sub>1</sub>-C<sub>6</sub> hydrocarbyl, C<sub>1</sub>-C<sub>6</sub> alkylene C<sub>3</sub>-C<sub>8</sub> cyclohydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cycloalkylene, and C<sub>4</sub>-C<sub>8</sub> heterocyclohydrocarbyl moieties of R<sub>1</sub> may optionally independently contain from one to three double or triple bonds; and wherein the C<sub>1</sub>-C<sub>4</sub> hydrocarbyl moieties and the C<sub>1</sub>-C<sub>6</sub> hydrocarbyl moieties of R<sub>8</sub> can optionally independently be substituted with hydroxy, C<sub>1</sub>-C<sub>4</sub> alkyl, amino, aryl, -CH<sub>2</sub>-aryl, -C<sub>3</sub>-C<sub>5</sub> cycloalkyl, or -O-(C<sub>1</sub>-C<sub>4</sub> alkyl), and can optionally independently be substituted with from one to five fluoro, and can optionally contain one or two double or triple bonds; and wherein each heterocyclohydrocarbyl group of R<sub>1</sub> contains from one to three heteromoieties selected from oxygen, S(O)<sub>m</sub>, nitrogen and NR<sub>12</sub>:

Art Unit: 1614

wherein  $R_2$  is hydrogen,  $C_1$ - $C_{12}$  hydrocarbyl,  $C_3$ - $C_8$  cyclohydrocarbyl,  $C_4$ - $C_8$  heterocyclohydrocarbyl,  $-(C_1$ - $C_6$  alkylene)  $C_3$ - $C_8$  cyclohydrocarbyl,  $-(C_3$ - $C_8$  cycloalkylene) ( $C_3$ - $C_8$  cyclohydrocarbyl),  $-(C_1$ - $C_6$  alkylene) ( $C_4$ - $C_8$  heterocyclohydrocarbyl),  $-(C_3$ - $C_8$  cycloalkylene) ( $C_4$ - $C_8$  heterocyclohydrocarbyl), aryl,  $-(C_1$ - $C_6$  alkylene) aryl, or  $-(C_3$ - $C_8$  cycloalkylene) (aryl); wherein each of the foregoing  $R_2$  groups may optionally be substituted with from one to three substituents independently selected from chloro, fluoro, and  $C_1$ - $C_6$  alkyl, wherein one of said one to three substituents can further be selected from bromo, iodo,  $C_1$ - $C_6$  alkoxy,  $-OH$ ,  $-O-CO-(C_1$ - $C_6$  alkyl),  $-O-CO-N(C_1$ - $C_4$  alkyl) ( $C_1$ - $C_2$  alkyl),  $-S(C_1$ - $C_6$  alkyl),  $-S(O)(C_1$ - $C_6$  alkyl),  $-S(O)_2(C_1$ - $C_6$  alkyl),  $S^+(C_1$ - $C_6$  alkyl)( $C_1$ - $C_2$  alkyl) $I^-$ ,  $CN$ , and  $NO_2$ ; and wherein the  $C_1$ - $C_{12}$  hydrocarbyl,  $-(C_1$ - $C_6$  alkylene),  $-(C_3$ - $C_8$  cyclohydrocarbyl),  $(C_3$ - $C_8$  cycloalkylene), and  $-(C_4$ - $C_8$  heterocyclohydrocarbyl) moieties of  $R_2$  may optionally independently contain from one to three double or triple bonds; and wherein each heterocyclohydrocarbyl group of  $R_2$  contains from one to three heteromoieties selected from oxygen,  $S(O)_m$ , nitrogen, and  $NR_{12}$ ;

or where  $R_1$  and  $R_2$  are as in  $-NHCHR_1R_2$ ,  $-OCHR_1R_2$ ,  $-SCHR_1R_2$ ,  $-CHR_1R_2$ , or  $-NR_1R_2$ ,  $R_1$  and  $R_2$  of B may form a saturated 5- to 8-membered ring which may optionally contain one or two double bonds and in which one or two of the ring carbons may optionally be replaced by an oxygen,  $S(O)_m$ , nitrogen or  $NR_{12}$ ; and which carbocyclic ring can optionally be substituted with from 1 to 3 substituents selected from the group consisting of hydroxy,  $C_1$ - $C_4$  alkyl, fluoro, chloro, bromo, iodo,  $CF_3$ ,  $-O-(C_1$ - $C_4$  alkyl),  $-O-CO-(C_1$ - $C_4$  alkyl),  $-O-CO-NH(C_1$ - $C_4$  alkyl),  $-O-CO-N(C_1$ - $C_4$  alkyl) ( $C_1$ - $C_2$  alkyl),  $-NH(C_1$ - $C_4$  alkyl),  $-N(C_1$ - $C_2$  alkyl)( $C_1$ - $C_4$  alkyl),  $-S(C_1$ - $C_4$  alkyl),  $-N(C_1$ - $C_4$  alkyl)  $CO(C_1$ - $C_4$  alkyl),  $-NHCO(C_1$ - $C_4$  alkyl),  $-COO(C_1$ - $C_4$  alkyl),  $-CONH(C_1$ - $C_4$  alkyl),  $-CON(C_1$ - $C_4$  alkyl)( $C_1$ - $C_2$  alkyl),  $CN$ ,  $NO_2$ ,  $-OSO_2(C_1$ - $C_4$  alkyl),  $-SO(C_1$ - $C_4$  alkyl),  $-SO_2(C_1$ - $C_4$  alkyl), wherein one of said one to three

substituents can further be selected from phenyl;

wherein each  $\sum m$  is independently zero, one or two;

wherein  $R_{11}$  is hydrogen, hydroxy, fluoro, ethoxy, or methoxy;

wherein  $R_{12}$  is hydrogen or  $C_1$ - $C_4$  alkyl;

with the proviso that when A is N then B" and  $R_4$  are defined, respectively, as

B" and  $R_4$  are defined above and when A is CH or  $CCH_3$ , then B" is  $-NR_1R_2$ , -

$NHCHR_1R_2$ ,  $-OCHR_1R_2$  or cyano and  $R_4$  is an electron deficient group.


Art Unit: 1614

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. C. Jones whose telephone number is (571) 272-0578. The examiner can normally be reached on Mondays, Tuesdays, Thursday, and Fridays from 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low, may be reached at (571) 272-0951. The official fax No. for correspondence is (703) 872-9306.

Also, please note that U.S. patents and U.S. patent application publications are no longer supplied with Office actions. Accordingly, the cited U.S. patents and patent application publications are available for download via the Office's PAIR, see <http://pair-direct.uspto.gov>. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications may be obtained from Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov> Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 1-866-217-9197 (toll free).

  
DWAYNE JONES  
PRIMARY EXAMINER  
Tech. Ctr. 1614  
September 27, 2004